

PRELIMINARY AMENDMENT TO CLAIMS

Cancel claims 1-10, and add claims 11-13.

11. (New) A method of genotyping plants of the species *Triticum aestivum* and the genus *Triticeae* at a microsatellite locus, the method comprising

a) amplifying chromosomal DNA with one or more oligonucleotide primer pairs specifically hybridizing to said locus of a region of said chromosomal DNA, wherein said region of the DNA comprises a repeated dinucleotide motif comprising at least one of the following selected from the group consisting of (GA:CT)_n, (GT:CA)_n, (AT:TA)_n, where $n \geq 10$, to obtain an amplification product,

b) wherein each primer pair consists of a first oligonucleotide of SEQ ID NO. x and a second oligonucleotide of SEQ ID NO. $x+1$, and wherein $x = 1, 3, 5, 7, 9, 11, 13, 15, 17, 19$; and

c) size fractionating the amplification product to provide a measure of the said motif of the chromosomal DNA between said primer pairs,

wherein the size of the amplification product is polymorphic for said locus and provides a marker for genotyping said plants.

12. (New) The method of claim 11, further comprising the step of using the resulting genotype for a further step chosen from the group consisting of DNA fingerprinting, species identification, relationship studies, similarity studies, characterization of cytological lines, and genetic mapping.

13. (New) The method of claim 11, further comprising one or more primer pairs, wherein said primer pairs have a first oligonucleotide of SEQ ID NO: x and a second oligonucleotide of SEQ ID NO: $x + 1$, and wherein $x = 95, 111, 156, 293, 337, 369, 437, 493, 553$, and/or 557.